B. Loeb

#9 BML 2/13/01

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/515,363
DATE: 02/09/2001
TIME: 13:05:38

p.5

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

ENTERED

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<120> TITLE OF INVENTION: Melanoma Differential Associated Gene-5 (mda-5), Promoter and uses
      Thereof
<130> FILE REFERENCE: 0575/60849
<140> CURRENT APPLICATION NUMBER: 09/515,363
<141> CURRENT FILING DATE: 2000-02-29
<160> NUMBER OF SEQ ID NOS: 3
<170> SOFTWARE: PatentIn version 3.0
<210> SEQ ID NO: 1
<211> LENGTH: 3365
<212> TYPE: DNA
<213> ORGANISM: Human
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cagcaccatc tgcttgggag aaccctctcc cttctctgag aaagaaagat gtcgaatggc     180
tattccacag acagaatttt ccgctatctc atctcctact tcagggccag ggtaaaatgg     240
tacatccagg tggagcctgt gctggactac ctgacctttc tgcctgcaga ggtgaaggag     300
cagattcaga ggacagtcgc cacctccggg aacatgcagg cagttgaact gctgctgagc     360
accttggaga aggaagtctg gcactttggt tggactcgga aattcgtaca ggacctccgg     420
agaaccggca gccctctggc cgccggctac atgaacccta aactcacgga cttgacctct     480
caatcatttg agaacgctca tgatgaatat ctcaaactgc tgaacctcct tcatcccact     540
ctgctggaca agcttctagt tagagacgtc ttggataagt gcatggaaga agaactcttg     600
acaattgaag acagaaaccg gattgctgct gcagaaaaca atggaaatga atcaggtgta     660
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cttcgtcaaa caggaaacaa tgaacttgtc caagagttaa caggctctga ttgctcagaa     780
agcaatgcag agattgagaa tttatcacaa gttgatggtc ctcaagtgga agagcaactt     840
ctttcaacca cagttcagcc aaatctggag aaggaggtct ggggcatgga gaataactca     900
tcagaatcat cttttgcaga ttcttctgta gtttcagaat cagacacaag tttggcagaa     960
ggaagtgtca gctgcttaga tgaaagtctt ggacataaca gcaacatggg cagtgattca    1020
ggcaccatgg gaagtgattc agatgaagag aatgtggcag caagagcatc cccggagcca    1080
gaactccagc tcaggcctta ccaaatggaa gttgcccagc cagccttgga agggaagaat    1140
atcatcatct gcctccctac agggagtgga aaaacccagg tggctgttta cattgccaag    1200
gatcacttag acaagaagaa aaaagcatct gagcctggaa aagttatagt tcttgtcaat    1260
aaggtactgc tagttgaaca gctcttccgc aaggagttcc aaccattttt gaagaaatgg    1320
tatcgtgtta ttggattaag tggtgatacc caactgaaaa tatcatttcc agaagttgtc    1380
aagtcctgtg atattattat cagtacagct caaatccttg aaaactccct cttaaacttg    1440
gaaaatggag aagatgctgg tgttcaattg tcagactttt ccctcattat cattgatgaa    1500
tgtcatcaca ccaacaaaga agcagtgtat aataacatca tgaggcatta tttgatgcag    1560
aagttgaaaa acaatagact caagaaagaa aacaaaccag tgattcccct tcctcagata    1620
ctgggactaa cagcttcacc tggtgttgga ggggccacga agcaagccaa agctgaagaa    1680
cacattttaa aactatgtgc caatcttgat gcatttacta ttaaaactgt taaagaaaac    1740
cttgatcaac tgaaaaacca aatacaggag ccatgcaaga agtttgccat tgcagatgca    1800
accagagaag atccatttaa agagaaactt ctagaaataa tgacaaggat tcaaacttat    1860
tgtcaaatga gtccaatgtc agattttgga actcaaccct atgaacaatg ggccattcaa    1920
atggaaaaaa aagctgcaaa agaaggaaat cgcaaagaac gtgtttgtgc agaacattta    1980
aggaagtaca atgaggccct acaaattaat gacacaattc gaatgataga tgcgtatact    2040
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/515,363

DATE: 02/[illegible]/[illegible]
TIME: [illegible]

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

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93 agtaatgaga [illegible] [illegible] taaatattgt gatggtgatg aagatgatga tgatttaaag   2160
95 aaacctttga aactggatga atcagataga tttctcatga ctttattttt tgaaaacaat   2220
97 aaaatgttga aaaggctagc tgaaaaccca gaatatgaaa atgaaaagct gaccaaatta   2280
99 agaaatacca taatggagca atatactaga actaaggaat cagcacgaga aataatcttt   2340
101 [illegible] gacaaagtgc atatgcgctt tcccagtgga ttactgaaaa tgaaaaattt   2400
103 gctgaaagtag [illegible] ccaccatctg atttgaactg gacacagaag tgatttcaaa   2460
105 [illegible] [illegible] [illegible] att agtaaat tttgcactgg aaaaatcaat   2520
107 ctgcttatcg ct[illegible]cacagt gcca[illegible]aa ggtctggata ttaaagaatg taacatagtt   2580
109 atccgttatg gtgtcgtcac caatgaaata gcctggtcc aggcccatgg tcgagccaga   2640
111 gctgatagaga gcacctacgt cctaggtgct cacagtggtt caggagttat cgaacatgag   2700
113 acagttaatg atttccgaga gaagatgatg tataaagcta tacatttatgt tcaaaatatg   2760
115 aaaccaaagg attatgctca taagattttg gaattacata tgcaaaatat aataagaaaag   2820
117 aaaatgaaag ctaagattaa tattgcccaag cattacagaga ataacctatc actaataact   2880
119 ttcctttgca aaaactccaa tgtactagcc tgttctgggt aagatatcca tcaaattgag   2940
121 aaaatgcatc acgtcaatat gacccacaag ttcaaggaac tttacattgt aagagaaaac   3000
123 aaagcactgc aaaagaagta taccaactat caaataaatg gtgaaaatat ctgcaaatct   3060
125 ggccaagctt gggaacaaat gatgatgcac aaaggcttag atttgccttg tctcaaaata   3120
127 aggaattttg tagtggattt caaaaataat tcaacaaaga aacaatacaa aaatgggta   3180
129 gaattaccta tcacattccc caatcttgac tattcagaat gctgtttatt tagtgatgag   3240
131 gattagcact tgattgaaga tttttttaaa atactatcag ttaaacattt aatatgatta   3300
133 tgattaatgt attcatttatg ctacagaact gacataagaa tcaataaaat gattgtttta   3360
135 ctctg                                                              3365
138 <219> SEQ ID NO: 2
139 <211> LENGTH: [illegible]
140 <212> TYPE: PRT
141 <213> ORGANISM: Human
143 <400> SEQUENCE: 2
145 Ala Thr Gly Thr Cys Gly Ala Ala Thr Gly Gly Gly Thr Ala Thr Thr
146 1               5                   10                  15
148 Cys Cys Ala Cys Ala Gly Ala Cys Gly Ala Gly Ala Ala Thr Thr Thr
149             20                  25                  30
151 Cys Cys Gly Cys Thr Ala Thr Cys Thr Cys Ala Thr Cys Thr Cys Gly
152         35                  40                  45
154 Thr Gly Cys Thr Thr Cys Ala Gly Gly Gly Cys Cys Ala Gly Gly Gly
155     50                  55                  60
157 Thr Gly Ala Ala Ala Ala Thr Gly Thr Ala Cys Ala Thr Cys Cys Ala
158 65                  70                  75                  80
160 Gly Gly Thr Gly Gly Ala Gly Cys Cys Thr Gly Thr Gly Cys Thr Gly
161                 85                  90                  95
163 Gly Ala Cys Thr Ala Cys Cys Thr Gly Ala Cys Cys Thr Thr Thr Cys
164             100                 105                 110
166 Thr Gly Cys Cys Thr Gly Cys Ala Gly Ala Gly Gly Thr Gly Ala Ala
167         115                 120                 125
169 Gly Gly Ala Gly Cys Ala Gly Ala Thr Thr Cys Ala Gly Ala Gly Gly
170     130                 135                 140
172 Ala Cys Ala Gly Thr Cys Gly Cys Cys Ala Cys Cys Thr Cys Cys Gly
173 145                 150                 155                 160
175 Gly Gly Ala Ala Cys Ala Thr Gly Cys Ala Gly Gly Cys Ala Gly Thr
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/515,363

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

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176                 165                 170                 175
176 Thr Gly Ala Ala Cys Thr Gly Cys Thr Gly Cys Thr Gly Ala Gly Cys
179                 180                 185                 190
191 Ala Cys Cys Thr Thr Gly Gly Ala Gly Ala Ala Gly Gly Gly Ala Gly
192             195                 200                 205
206 Thr Cys Thr Gly Gly Cys Ala Cys Cys Thr Thr Gly Gly Thr Thr Gly
207     210                 215                 220
221 Gly Ala Ala Thr Cys Gly Gly Gly Ala Ala Thr Thr Cys Gly Thr Gly
222 225                 230                 235                 240
236 Gly Ala Gly Gly Cys Cys Cys Thr Cys Cys Gly Gly Ala Gly Ala Ala
237                 245                 250                 255
251 Cys Cys Gly Gly Cys Ala Gly Cys Cys Cys Thr Cys Thr Gly Gly Cys
252             260                 265                 270
266 Cys Gly Cys Cys Cys Gly Cys Thr Ala Cys Ala Thr Gly Ala Ala Cys
267         275                 280                 285
281 Cys Cys Thr Gly Ala Gly Cys Thr Cys Ala Cys Gly Gly Ala Cys Thr
282     290                 295                 300
296 Thr Gly Cys Cys Cys Thr Cys Thr Cys Cys Ala Thr Cys Gly Thr Thr
297 305                 310                 315                 320
311 Thr Gly Ala Gly Ala Ala Cys Gly Cys Thr Cys Ala Thr Gly Ala Thr
312                 325                 330                 335
326 Gly Ala Ala Thr Ala Thr Cys Thr Cys Cys Ala Ala Cys Thr Gly Cys
327             340                 345                 350
341 Thr Gly Ala Ala Cys Cys Thr Cys Cys Thr Thr Cys Ala Gly Cys Cys
342         355                 360                 365
356 Cys Ala Cys Thr Cys Thr Gly Gly Thr Gly Gly Ala Cys Ala Ala Gly
357     370                 375                 380
371 Cys Thr Thr Cys Thr Ala Gly Thr Thr Ala Gly Ala Gly Ala Cys Gly
372 385                 390                 395                 400
401 Thr Cys Thr Thr Gly Gly Ala Thr Ala Ala Gly Thr Gly Cys Ala Thr
402                 405                 410                 415
416 Gly Gly Ala Gly Gly Ala Gly Gly Ala Ala Cys Thr Gly Thr Thr Gly
417             420                 425                 430
431 Ala Cys Ala Ala Thr Thr Gly Ala Ala Gly Ala Cys Ala Gly Ala Ala
432         435                 440                 445
446 Ala Cys Cys Gly Gly Ala Thr Thr Gly Cys Thr Gly Cys Thr Gly Cys
447     450                 455                 460
461 Ala Gly Ala Ala Ala Ala Cys Ala Ala Thr Gly Gly Ala Ala Ala Thr
462 465                 470                 475                 480
481 Gly Ala Ala Thr Cys Ala Gly Gly Gly Thr Gly Thr Ala Ala Gly Ala Gly
482                 485                 490                 495
496 Ala Gly Cys Thr Ala Cys Thr Ala Ala Ala Ala Ala Gly Gly Ala Thr
497             500                 505                 510
511 Thr Gly Thr Gly Cys Ala Gly Ala Ala Ala Gly Ala Ala Ala Ala Cys
512         515                 520                 525
526 Thr Gly Gly Thr Thr Cys Thr Cys Thr Gly Cys Thr Gly Thr Thr Cys
527     530                 535                 540
541 Thr Gly Ala Ala Thr Gly Thr Thr Cys Thr Thr Cys Gly Thr Cys Ala
542 545                 550                 555                 560
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/515,363

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

250 Ala Ala Cys Ala Gly Gly Ala Ala Ala Cys Ala Ala Thr Gly Ala Ala
251 565 570 575
253 Cys Thr Thr Gly Thr Cys Cys Ala Ala Gly Ala Gly Thr Thr Ala Ala
254 580 585 590
256 Cys Ala Gly Gly Cys Thr Cys Thr Gly Ala Thr Thr Gly Cys Thr Cys
257 595 600 605
259 Ala Gly Ala Ala Ala Gly Cys Ala Ala Thr Gly Cys Ala Gly Ala Gly
260 610 615 620
262 Ala Thr Thr Gly Ala Gly Ala Ala Thr Thr Thr Ala Thr Cys Ala Cys
263 625 630 635 640
265 Ala Ala Gly Thr Thr Gly Ala Thr Gly Gly Thr Cys Cys Thr Cys Ala
266 645 650 655
268 Ala Gly Thr Gly Gly Ala Ala Gly Ala Gly Cys Ala Ala Cys Thr Thr
269 660 665 670
271 Cys Thr Thr Thr Cys Ala Ala Cys Cys Ala Cys Ala Gly Thr Thr Cys
272 675 680 685
274 Ala Gly Cys Cys Ala Ala Ala Thr Cys Thr Gly Gly Ala Gly Ala Ala
275 690 695 700
277 Gly Gly Ala Gly Gly Thr Cys Thr Gly Gly Gly Gly Gly Cys Ala Thr Gly
278 705 710 715 720
280 Gly Ala Gly Ala Ala Thr Ala Ala Cys Thr Cys Ala Thr Cys Ala Gly
281 725 730 735
283 Ala Ala Thr Cys Ala Thr Cys Thr Thr Thr Thr Gly Cys Ala Gly Ala
284 740 745 750
286 Thr Thr Cys Thr Thr Cys Thr Gly Thr Ala Gly Thr Thr Thr Cys Ala
287 755 760 765
289 Gly Ala Ala Thr Cys Ala Gly Ala Cys Ala Cys Ala Ala Gly Thr Thr
290 770 775 780
292 Thr Gly Gly Cys Ala Gly Ala Ala Gly Gly Ala Ala Gly Thr Gly Thr
293 785 790 795 800
295 Cys Ala Gly Cys Thr Gly Cys Thr Thr Ala Gly Ala Thr Gly Ala Ala
296 805 810 815
298 Ala Gly Thr Cys Thr Thr Gly Gly Ala Cys Ala Thr Ala Ala Cys Ala
299 820 825 830
301 Gly Cys Ala Ala Cys Ala Thr Gly Gly Gly Cys Ala Gly Thr Gly Ala
302 835 840 845
304 Thr Thr Cys Ala Gly Gly Cys Ala Cys Cys Ala Thr Gly Gly Gly Ala
305 850 855 860
307 Ala Gly Thr Gly Ala Thr Thr Cys Ala Gly Ala Thr Gly Ala Gly Ala
308 865 870 875 880
310 Ala Gly Ala Ala Thr Gly Thr Gly Gly Cys Ala Gly Cys Ala Ala Gly
311 885 890 895
313 Ala Gly Cys Ala Thr Cys Cys Cys Cys Gly Gly Ala Gly Cys Cys Ala
314 900 905 910
316 Gly Ala Ala Cys Thr Cys Cys Ala Gly Cys Thr Cys Ala Gly Gly Gly Cys
317 915 920 925
319 Cys Thr Thr Ala Cys Cys Ala Ala Ala Thr Gly Gly Ala Ala Gly Thr
320 930 935 940
322 Thr Gly Cys Cys Cys Ala Gly Cys Cys Ala Gly Cys Cys Thr Thr Gly

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/515,363

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

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Gly Ala Xaa Gly Gly Gly Ala Ala Thr Ala Ala Thr Ala Thr Cys Ala
                965                 970                 975
Thr Cys Xaa Thr Cys Thr Gly Cys Cys Thr Cys Cys Cys Thr Ala Cys
            980                 985                 990
Ala Ala Gly Gly Ala Gly Thr Gly Gly Ala Ala Ala Ala Ala Cys Cys
        995                1000                1005
Ala Gly Ala Gly Thr Gly Gly Cys Thr Gly Thr Thr Thr Ala Cys
    1010                1015                1020
Ala Thr Thr Gly Cys Cys Ala Ala Gly Gly Ala Thr Cys Ala Cys
1025                1030                1035
Thr Thr Ala Gly Ala Cys Ala Ala Gly Ala Ala Gly Ala Ala Ala
1040                1045                1050
Ala Ala Ala Gly Cys Ala Thr Cys Thr Gly Ala Gly Cys Cys Thr
1055                1060                1065
Gly Gly Ala Ala Ala Ala Gly Thr Thr Ala Thr Ala Gly Thr Thr
1070                1075                1080
Cys Thr Thr Gly Thr Cys Ala Ala Thr Ala Ala Gly Gly Thr Ala
1085                1090                1095
Cys Thr Gly Cys Thr Ala Gly Thr Thr Gly Ala Ala Cys Ala Gly
1100                1105                1110
Cys Thr Cys Thr Thr Cys Cys Gly Cys Ala Ala Gly Gly Ala Gly
1115                1120                1125
Thr Thr Cys Cys Ala Ala Cys Cys Ala Thr Thr Thr Thr Thr Gly
1130                1135                1140
Ala Ala Gly Ala Ala Ala Thr Gly Gly Thr Ala Thr Cys Gly Thr
1145                1150                1155
Gly Thr Thr Ala Thr Thr Gly Gly Ala Thr Thr Ala Ala Gly Thr
1160                1165                1170
Gly Gly Thr Gly Ala Thr Ala Cys Cys Cys Ala Ala Cys Thr Gly
1175                1180                1185
Ala Ala Ala Ala Thr Ala Thr Cys Ala Thr Thr Thr Thr Cys Cys
1190                1195                1200
Gly Ala Ala Gly Thr Thr Gly Thr Cys Ala Ala Gly Thr Cys Ala
1205                1210                1215
Thr Gly Thr Gly Ala Thr Thr Ala Thr Thr Ala Thr Cys Ala Gly
1220                1225                1230
Ala Cys Ala Gly Thr Cys Ala Ala Ala Ala Thr Cys Ala Thr Thr
1235                1240                1245
Gly Ala Ala Ala Ala Cys Thr Cys Cys Thr Cys Thr Thr Ala Thr
1250                1255                1260
Ala Ala Cys Thr Thr Gly Gly Ala Ala Ala Ala Thr Gly Gly Ala
1265                1270                1275
Gly Ala Ala Gly Ala Thr Gly Cys Thr Gly Gly Thr Gly Thr Thr
1280                1285                1290
Cys Ala Ala Ala Thr Thr Gly Thr Cys Ala Gly Ala Cys Thr Thr
1295                1300                1305
Thr Cys Cys Cys Thr Cys Ala Thr Thr Ala Thr Cys Ala Thr Thr
1310                1315                1320
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PYIs

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION NO: US/09/515,363

Input Set : A:\ES.txt
Output Set: N:\CRF3\02092001\I515363.raw

L:790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3